

## CLAIMS:-

1. A pagewidth printhead assembly for a printer, the printer having a page width, the assembly comprising:
  - 5 a longitudinal core contained within and restrained by an outer laminated shell ;
  - a modular, pagewidth printhead mounted to the core;
  - the printhead formed from one or more silicon structures;
  - the shell and the printhead having substantially the same effective coefficient of thermal expansion.
- 10 2. A printhead assembly according to claim 1, wherein:  
the pagewidth printhead is stationary and generally as long as the page width.
3. A printhead assembly according to claim 1, wherein:
  - 15 the core has formed in it one or more ink reservoirs which collectively lead to one or more printhead micro mouldings which are carried by the core.
4. A printhead assembly according to claim 1, wherein:
  - the laminated shell is formed from at least three metals laminated together, the
  - 20 laminate having inner and outer layers which have the same coefficient of thermal expansion.
5. A printhead assembly according to claim 1, wherein:
  - the printhead is fabricated from silicon and constructed using micro
  - 25 electromechanical techniques.
6. A printhead assembly according to claim 1, wherein:  
the core is an extrusion in which is formed separate ink reservoirs.

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7. A printhead assembly according to claim 2, wherein:  
the outer shell is a laminated structure having an odd number of longitudinally  
extending continuous layers of at least two different metals wherein layers in a  
symmetrical arrangement.
- 5 8. A printhead assembly according to claim 1, wherein:  
the modular printhead comprises MEMS modules which are positioned end to end  
along the core.
- 10 9. A printhead assembly according to claim 1, wherein:  
the laminated shell comprises two or more different materials, each having a  
different coefficient of thermal expansion.
- 15 10. A printhead assembly according to claim 9, wherein:  
at least two materials have coefficients of expansion which are different than the  
coefficient of expansion of silicon.
- 20 11. A printhead assembly according to claim 10, wherein:  
the laminated shell comprises outer layers of invar.
- 25 12. A printhead assembly according to claim 1, wherein:  
the assembly has a composite coefficient of expansion generally equal to the  
coefficient of expansion silicon.
- 30 13. A printhead assembly according to claim 8, wherein:  
each module further comprises ink nozzles, chambers and actuators.
14. A printhead assembly according to claim 1, wherein:  
the shell partially encases the core.